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EMPLOYMENT PATTERNS FOR
1986 GRADUATES OF THE
U.S. SCHOOLS OF PUBLIC HEALTH

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I. INTRODUCTION

In early 1987 the Association of Schools of Public Health (ASPH) conducted an employment survey of individuals who graduated from schools of public health during the period January 1 - August 31, 1986. The survey (see Appendix A) was sent to all graduates for whom the 23 schools of public health had addresses, including foreign graduates. The conduct of the 1986 survey, as well as the survey form, closely resembled the conduct and form of a survey of 1981 graduates of schools of public health (1). The 1981 survey included U.S. graduates from the then 21 schools of public health.

The Bureau of Health Professions (HRSA/PHS/DHHS) awarded ASPH a purchase order for the purpose of analyzing its graduate employment data.¹ The data to be analyzed included data from the 1981 and 1986 surveys, and what data was available from a survey conducted of 1978 and 1979 graduates of schools of public health. The 1981 and 1986 surveys were coded and entered into the ASPH computer. Raw data from the 1978 and 1979 survey was not available, so a 1982 publication summarizing the results was used (2).

The purpose of the data analysis was twofold: 1) to provide information on the current job market for school of public health graduates; and 2) to provide information on employment trends since 1978.

¹ Purchase Order # HRSA 86-341 (P). Howard L. Kelley, DDS, MPH, served as project officer for HRSA.

II. SURVEYS OF GRADUATES OF SCHOOLS OF PUBLIC HEALTH

The 1978 and 1979 Survey

In the latter half of 1979 (May - December) a survey was sent to approximately 3,300 graduates of 19 schools of public health (2 schools did not participate). Of the 19 schools participating, 10 surveyed 1978 graduates and 17 surveyed 1979 graduates. A total of 2,169 usable forms were returned for a response rate of about 66%.

The 1978 and 1979 survey contained questions on demographics, prior training and experience, public health degree and area, financial support, employment search and views regarding the job market, employing agency, and job responsibilities.

The survey forms were coded and processed at the University of North Carolina. A report summarizing the survey results was published in February 1982 (2). The locations of the survey forms and the data tapes that were prepared are unknown, and the 1982 publication is the only material that is currently available to ASPH. Information was extracted from the report for the trends analysis.

The 1981 Survey

In early 1982 ASPH conducted a survey of 1981 U.S. graduates of schools of public health. A total of 2,450 survey forms were sent to U.S. graduates of all 21 schools. According to an unpublished report written in November 1982 (1), 1,729 usable responses were returned, for a response rate of 71%. However, when the 1981 data was entered in the ASPH computer in 1987, a total of 1,446 survey forms were entered. A few forms were discarded as duplicates, but about 280 were unaccounted for.

The survey forms were originally coded at ASPH and sent to the University of North Carolina where they were processed and computer tables run. They were later returned to ASPH. In 1987 the forms were rechecked and recoded where necessary to conform to the coding used for the 1986 survey and were then entered into the ASPH computer.

The 1981 survey contained questions about employing agency and job area, job search, demographics, financial support and indebtedness, area of specialization, postbaccalaureate degree, and prior experience. There were no questions on perceptions of the job market or value of the public health degree.

The 1986 Survey

In Spring of 1987 ASPH conducted a survey of 1986 graduates of schools of public health (excluding bachelors) for whom there were addresses. A total of 2,567 survey forms were sent out and 1,743 usable forms were returned for a response rate of 68%. A total of 266 forms (10%) were sent to foreign addressees, something not done previously.

The 1986 survey closely resembled the 1981 survey. Despite some known problems with the 1981 survey, it was decided to send out a similar survey for two reasons. First, it was agreed the data should be comparable so that employment trends since 1981 could be analyzed. This meant primarily that the various categories used would remain the same. This caused some difficulties, as there were problems with some of the categories. These problems will be discussed in Chapter III.

The second reason was that ASPH simply did not have the staff time or funds available to redesign and implement a different type of study. ASPH had originally desired to conduct a longitudinal survey to look at career patterns and job changes over time. This is an important aspect of employment and the kinds of information that could be gained from such a survey would be very useful to the schools of public health and others interested in employment of public health professionals. With the exception of an early survey of 1956-1972 graduates of schools of public health (3), long-term employment patterns of graduates have not really been studied.

While the categories used in the 1986 survey remained unchanged, a number of questions were added. These included questions regarding citizenship, enrollment status, undergraduate major and the importance of the public health degree. A copy of the 1986 survey is included as Appendix A.

III. RESULTS OF THE 1986 SURVEY

The 23 schools of public health supplied ASPH with names and addresses of 2,567 individuals who received master's or doctoral degrees during the period January 1-August 31, 1986. Survey forms were sent out in February 1987. Follow-up survey forms were sent to non-respondents with U.S. addresses in April 1987. It was decided that foreign addressees who had not responded would not be resurveyed, due to the expense involved. As of September 12, 1987, when data entry was completed, 1,743 usable responses were received. This is a response rate of about 68%. The number of graduates surveyed and responses received by school are as follows:

<u>School</u>	<u>No. of Graduates Surveyed</u>	<u>No. of Responses Received</u>	<u>Response Rate</u>
Alabama	95	54	57%
Boston	81	53	65%
Cal-Berkeley	233	158	68%
Cal-UCLA	187	133	71%
Columbia	130	85	65%
Harvard	186	114	61%
Hawaii	27	18	67%
Illinois	52	38	73%
Johns Hopkins	294	178	61%
Loma Linda	110	76	69%
Massachusetts	41	37	90%
Michigan	103	79	77%
Minnesota	94	74	79%
North Carolina	195	157	81%
Oklahoma	53	39	74%
Pittsburgh	92	62	67%
Puerto Rico	50	34	68%
San Diego	39	25	64%
South Carolina	48	41	85%
Texas	121	72	60%
Tulane	141	74	53%
Washington	104	76	73%
Yale	91	66	73%
Total	2,567	1,743	68%

The lower response rate at some schools -- notably Alabama, Harvard, Johns Hopkins and Tulane -- is primarily due to the large number of foreign addressees among their graduates.

The extent to which the 2,567 individuals surveyed represented the actual number of graduates during the period January 1-August 31, 1986 is unclear. The 23 schools reported a total of 3,268 graduates for the 1985-86 academic year, as follows:

<u>School</u>	<u>Graduates</u>
Alabama	101
Boston	101
Cal-Berkeley	238
Cal-UCLA	196
Columbia	193
Harvard	219
Hawaii	76
Illinois	64
Johns Hopkins	294
Loma Linda	143
Massachusetts	31
Michigan	241
Minnesota	213
North Carolina	261
Oklahoma	87
Pittsburgh	119
Puerto Rico	58
San Diego	49
South Carolina	63
Texas	128
Tulane	192
Washington	90
Yale	111
Total	3268

The January - August timeframe was chosen to conform to the same time period used in the 1981 survey. It included graduates from the winter, spring and summer terms. In a few instances, schools included graduates from December 1985 or early Fall 1986 because they felt these individuals should be included as part of the survey group. Since the graduation dates for these individuals were generally less than a month outside the established timeframe, they were included. As can be seen from a comparison of the 1985-86 graduate data and the 1986 survey figures, in most cases there is not a great deal of disparity between the number of graduates reported for 1985-86 and the number of graduates surveyed for 1986.

Demographics

The 1,743 respondents included 1,610 U.S. citizens or permanent U.S. residents and 133 foreign citizens. Foreign graduates will be dealt with separately. The following analysis deals with U.S. citizens and permanent U.S. residents only.

Of the 1,610 respondents, 1,027 or 64% were female and 580 or 36% were male (3 unknown). This corresponds to total U.S. graduates for 1985-86 when 63% were female and 37% were male.

The race/ethnic background for the survey respondents and for 1985-86 graduates is as follows:

	<u>1986 Survey</u>		<u>1985-86 Graduates</u>	
Asian/Pacific Islander	81	5.1%	112	4.3%
Black, not of Hispanic origin	84	5.3	150	5.7
White, not of Hispanic origin	1,359	84.9	2,242	85.6
Hispanic	68	4.2	95	3.6
American Indian/Alaskan Native	8	0.5	20	0.8
Other	2	-	-	-
Unknown	8	-	84	-
	1,610	100.0%	2,703	100.0%

The age of survey respondents ranged from 21-66, with a median age of 31. The mean age of respondents is 32.6 years, but the median age is probably a better indicator.

<u>Age</u>	<u>No. of Graduates</u>	
21-25	191	12.0%
26-30	564	35.3
31-35	394	24.6
36-40	242	15.1
41-45	116	7.3
46-50	51	3.2
over 50	40	2.5
unknown	12	-
	1,610	100.0%

The largest age group was composed of 26-30 year-olds (35%) followed by the 31-35 year-old group (25%). Thus 60% of the graduates were in the 26-35 age range.

Employed graduates (1,322) provided addresses of their employers. The geographic location of 1986 graduates was as follows:

<u>State or Geographic Area</u>	<u>Number</u>
Alabama	22
Alaska	12
Arizona	6
Arkansas	1
California	233
Colorado	9
Connecticut	23
Delaware	1
Florida	17

<u>State or Geographic Area</u>	<u>Number</u>
Georgia	18
Hawaii	14
Idaho	3
Illinois	50
Indiana	5
Iowa	3
Kansas	4
Kentucky	4
Louisiana	14
Maine	2
Maryland	74
Massachusetts	106
Michigan	36
Minnesota	43
Mississippi	3
Missouri	7
Nevada	1
New Hampshire	5
New Jersey	13
New Mexico	7
New York	90
North Carolina	65
North Dakota	3
Ohio	19
Oklahoma	25
Oregon	10
Pennsylvania	46
Rhode Island	1
South Carolina	26
South Dakota	3
Tennessee	9
Texas	57
Utah	11
Vermont	1
Virginia	13
Washington	45
West Virginia	2
Wisconsin	11
Wyoming	2
District of Columbia	44
Puerto Rico	26
Virgin Islands	2
Australia/NZ	1
Canada	1
Europe	6
Latin American/Carib.	3
Middle East/North Africa	3
Africa	2
Asia	5
Unknown	54
Total	1,322

In terms of geographic areas, graduates can be grouped as follows (the numbers in parentheses represent the number of schools of public health in the area):

<u>Geographic Area</u>	<u>No. of Graduates</u>	
1. East North Central (2) (Ill, Ind, Mich, Ohio, Wis)	121	9.5%
2. East South Central (1) (Ala, Ky, Miss, Tenn)	38	3.0
3. Middle Atlantic (2) (NJ, NY, Pa)	149	11.8
4. Mountain (0) (Ariz, Colo, Idaho, Mont, Nev, NM, Utah, Wyo)	39	3.1
5. New England (4) (Conn, Maine, Mass, NH, RI, Vt)	138	10.8
6. Pacific (6) (Alaska, Cal, Hawaii, Ore, Wash)	314	24.8
7. South Atlantic (3) (Del, DC, Fla, Ga, Md, NC SC, Va, WVa)	260	20.5
8. West North Central (1) (Iowa, Kan, Minn, Mo, Neb, ND, SD)	63	5.0
9. West South Central (3) (Ark, La, Okla, Tx)	97	7.6
10. Puerto Rico/Virgin Islands (1)	28	2.2
11. Outside U.S. (0)	21	1.7

Close to one-half (45.3%) of the graduates were employed in the Pacific and South Atlantic states. These areas contain nine schools of public health*, including some of the largest schools. One would expect to find some correlation between the location of the schools and the number of graduates in the area. The schools attract a large number of local residents, including employed students, and are often located in areas where there is a large job market.

* The University of South Florida, which was accredited in Spring of 1987, was not included in the survey.

A comparison of the number of employed graduates by area and the number of employed graduates of schools within the areas is as follows:

<u>Geographic Area</u>		<u>No. of Graduates Employed in Area</u>		<u>No. of Employed Graduates from Schools in Area</u>	
1.	East North Central (2 schools)	121	9.5%	97	7.3%
2.	East South Central (1 school)	38	3.0	42	3.2
3.	Middle Atlantic (2 schools)	149	11.8	119	9.0
4.	Mountain (0 schools)	39	3.1	0	-
5.	New England (4 schools)	138	10.8	205	15.5
6.	Pacific (6 schools)	314	24.8	366	27.7
7.	South Atlantic (3 schools)	260	20.5	272	20.6
8.	West North Central (1 school)	63	5.0	67	5.1
9.	West South Central (3 schools)	97	7.6	127	9.6
10.	Puerto Rico/Virgin Islands (1 school)	28	2.2	27	2.0
11.	Outside U.S. (0 schools)	21	1.7	0	-

Employment

Of the 1,610 U.S. graduates, 1,322 or 82.1% were employed, 185 or 11.5% were enrolled in an educational program, and 103 or 6.4% were unemployed. Of the 103 unemployed, 81 were seeking employment and 21 were not seeking employment (1 unknown). Thus, of the total graduates, only 5% were still seeking employment at the time of the survey. A few individuals wrote on their survey forms that they were seeking other jobs, but these individuals were currently employed.

Of the 1,322 employed graduates, 1,209 or 92% were employed full-time and 111 or 8% were employed part-time (2 unknown).

About one-quarter (25.7%) of the employed graduates were working for the same employer they had before entering a school of public health, either in the same position (14.7%) or in a higher position (11.0%).

The median salary of all employed graduates was \$27,500. The mean salary was \$30,377, but because of the very wide range of salary levels, it is believed that the median salary is a better indicator. In addition, it is believed that an analysis of salary levels should exclude part-time individuals, since the great majority of graduates are employed full-time.

The salary levels for full-time employed graduates, broken down by area of specialization*, are as follows:

Area	No.	Salary		
		Range	Mean	Median
BIOSTAT	52	9,900-43,200	29,009	28,750
EPID	121	0-70,000	30,573	28,239
HSA	377	12,000-120,000	32,564	29,500
PHP&PM	102	3,600-82,000	33,857	30,000
H.EDUC/BS	117	2,400-75,000	26,666	25,000
ENV.SC	94	12,000-100,000	30,951	28,000
OS&H	95	20,000-100,000	36,547	31,000
NUTR	47	8,220-57,000	23,639	20,850
BIOMED	37	15,000-70,000	25,867	21,500
OTHER	28	6,000-120,000	31,982	25,300
OTHER HEALTH	105	9,600-200,000	36,860	30,000
NON-HEALTH	28	9,600-40,000	25,065	25,000
UNKNOWN	6	-	-	-
Total	1,209	0-200,000	31,524	28,000

As can be observed, the range of salaries was tremendous; the \$0.00 salary represents an individual working as a full-time teaching volunteer in Asia, while the \$200,000 salary represents a physician in private practice.

The median salary of full-time employed graduates was \$28,000, ranging from \$20,850 for those employed in the area of nutrition to \$31,000 for those employed in occupational safety and health. Before drawing conclusions about differences in job areas, however, it should be noted that some of these categories are very small in terms of the

* For an explanation of areas of specialization, see Appendix B.

number of individuals represented, and making generalizations about salary levels in specific areas is risky. In addition, there are a number of other factors involved in salary levels -- educational level, type of employing agency, geographic area, etc. The vast range of salaries represented is probably the best indication of the variety of factors that influence specific salary levels.

Some other differences in salary levels can be noted, but again it must be kept in mind that no one variable can fully explain the differences.

The median salary (full-time) for female graduates was \$27,000, while the median salary for males was \$32,000. The median salary for master's-level graduates was \$26,000, while the median salary for graduates who received doctorates or had prior doctorates was \$38,500. (This includes both medical and non-medical doctorates.) The median salary for employees of government-sponsored agencies was \$28,000, for employees of voluntary agencies it was \$27,300, and for employees of for-profit agencies it was \$30,000. Median salary level of graduates in the Pacific area was \$30,000, in the South Atlantic area it was \$26,050, in the West South Central area it was \$30,000, and in the East North Central area it was \$27,700.

Graduates were asked to indicate the type of agency in which they were employed. The results are as follows:

Type of Employing Agency/Institution/Organization	No. of Graduates	
1. Association, foundation or voluntary agency (e.g., AHA, AMA, or Heart Fund)	56	4.3%
2. Blue Cross/Blue Shield or other insurance	15	1.1
3. Clinic or community health center	48	3.7
4. Consulting firm	70	5.3
5. Federal Government (national or regional)	126	9.6
6. Health department (State or local)	187	14.2
7. Health maintenance organization (HMO)	49	3.7
8. Group practice (fee-for-service)	23	1.7
9. Health systems agency or other planning agency	5	0.4
10. Home health agency	9	0.7
11. Hospital	253	19.2
12. International health agency/institute	17	1.3
13. Long-term care facility	11	0.8
14. Mental health or retardation facility	14	1.1
15. Professional Standards Review Organization	1	0.1
16. Regulatory agency	20	1.5
17. Research	33	2.5
18. Industrial or commercial firm	72	5.5

<u>Type of Employing Agency/Institution/Organization</u>	<u>No. of Graduates</u>	
19. University (teaching, research, or administration)	219	16.7
20. Other	87	6.6
21. Multiple responses	4	-
22. Unknown	3	-
Total	1,322	100.0%

Hospitals, universities, health departments and the Federal Government employed the greatest number of graduates, about 60% of the total. The type of ownership or sponsorship of the employing agency was as follows:

<u>Type of Primary Ownership or Sponsorship of Employer</u>	<u>No. of Graduates</u>	
1. Federal Government (civilian)	108	8.3%
2. Federal Government (military)	61	4.7
3. State Government	285	21.8
4. Local Government (city or county)	158	12.1
5. Regional (multi-State)	2	0.2
6. Voluntary/not-for-profit (non-Govt.)	428	32.8
7. Proprietary/for profit	247	18.9
8. Other (specify)	16	1.2
9. Multiple responses	3	-
10. Unknown	14	-
Total	1,322	100.0%

Nearly one-half (47.1%) of the graduates worked for agencies owned or sponsored by various levels of government. Public universities were generally included in the state government category. About one-third of the graduates worked for non-profit agencies and 19% worked for for-profit agencies. There is a great deal of overlap between the type of agency and the type of ownership. For example, universities were classified as either state government or voluntary/non-profit, while hospitals could be government, non-profit or for-profit. Insurance firms and HMOs were also classified as non-profit or for-profit. There are some problems with the categories, and they need to be reworked in future surveys. Some are too vague (research), some too narrow (PSRO), and some are confusing (does "group practice" include physicians in private practice?). There also needs to be a category for state and local agencies other than health departments. A number of graduates listed under "Other" were employed in these agencies.

Graduates were asked to describe their primary area of job responsibility. The results are as follows:

<u>Primary Area of Job Responsibility</u>	<u>No. of Graduates</u>	
1. Administration/planning/ evaluation/policy analysis	463	35.8%
2. Clinical services to patients or clients	203	15.7
3. Laboratory services to patients or clients	16	1.2
4. Social services to patients or clients	22	1.7
5. Educational/community organizational services to patients or clients	95	7.3
6. Educational services to students and/or research	189	14.6
7. Consultation services to agencies or institutions	142	11.0
8. Other	166	12.8
9. Multiple responses	18	-
10. Unknown	8	-
Total	1,322	100.0%

Over one-third (36%) of the graduates identified their primary job responsibility as administration/planning/evaluation/policy analysis. Sixteen percent performed clinical services and 15% performed educational services to students and/or research. As can be seen from the large number of responses in the "other" category, this classification scheme also has problems. A large number of individuals were engaged in research in a non-university setting. They undoubtedly identified category #6 as pertaining only to universities, which is probably an accurate interpretation. A significant number of graduates were also engaged in enforcement/regulatory activities, and there is no category for this. Most of the graduates who were industrial hygienists also listed their duties as "other."

Job Search

Graduates were asked to specify the number of interviews, number of job offers, and number of months they sought employment. There was a great deal of confusion over the questions and they need to be reworded for future surveys. However, the data is accurate enough to make general observations. Graduates not previously employed sought active employment for an average of only two months, with 69% finding employment in less than four months. The graduates generally had 2-3 interviews and received an average of 1-2 job offers. The greatest proportion of graduates (41%) received one job offer. The data indicates most graduates found employment rather easily.

Financial Issues

Of the 1,610 graduates, 971 or 60% reported some amount of current indebtedness from education-related expenses. The median amount of indebtedness was \$10,000 (mean \$13,513). A total of 666 or 41% reported that they had incurred education-related indebtedness before entering the school of public health. The median amount of prior indebtedness was \$6,000 (mean \$9,055).

Graduates obtained funds for meeting education-related expenses from a variety of sources. The primary and secondary sources of support for graduates were as follows:

<u>Source of Support</u>	<u>Primary Source</u>		<u>Secondary Source</u>	
Full-time job during academic year	195	12.6%	64	5.0%
Part-time job during academic year	149	9.6	345	26.7
Immediate family or relatives (including spouse)	225	14.6	175	13.5
Loan(s)	332	21.5	230	17.8
Personal savings and/or unearned income	120	7.8	162	12.5
Subsidization by employer	90	5.8	35	2.7
Traineeship, fellowship, scholarship, grant	399	25.8	245	19.0
Veterans' educational benefits	13	0.8	21	1.6
Other	23	1.5	15	1.2
Multiple responses	47	-	62	-
Unknown	17	-	256	-
	16,10	100.0%	1,610	100.0%

Traineeships and loans were the major sources of support for graduates. Forty percent of the graduates (644) indicated that traineeships were a primary or secondary source of support, while 562 or 35% identified loans as of primary or secondary importance. Less than one-third (31%) of the graduates indicated they received a U.S. Public Health Service Traineeship while enrolled at their school of public health.

Public Health Degree and Area of Specialization

The 1,610 graduates received the following degrees from their school of public health:

<u>Degree</u>	<u>No. of Graduates</u>	
MPH	1093	68.0%
MSPH	92	5.7
MS/SM	137	8.5
MHA/MHSA	94	5.8
Other Masters	36	2.2
PhD	71	4.4
DrPH	36	2.2
DSc/ScD	20	1.2
Other Doctorate	3	0.2
Other Degree	27	1.7
Unknown	1	-
Total	1,610	100.0%

The "other degree" category consists of joint degrees as follows:

<u>Joint Degree</u>	<u>No. of Graduates</u>
MD-MPH	11
MPH-MBA	5
MPH-MSW	3
MPH-MSN	2
Other	6
Total	27

The areas of specialization for the graduates were as follows:

<u>Area</u>	<u>No. of Graduates</u>	
BIOSTAT	60	3.8%
EPID	247	15.6
HSA	503	31.7
PHP&PM	145	9.1
H. EDUC/BS	173	10.9
ENV. SC	134	8.5
OS&H	111	7.0
NUTR	78	4.9
BIOMED	49	3.1
OTHER	86	5.4
UNKNOWN	24	-
Total	1,610	100.0%

Following is a comparison for employed graduates of their area of specialization in graduate study with their area of specialization in employment. It should be noted at the outset that there is some overlap between areas in the employment category. For example, a person employed as an administrator of a nutrition program might have identified himself/herself as employed in the health services

administration area rather than the nutrition area. Similarly, a person employed as a maternal and child health educator might have identified his/her employment area as health education rather than maternal and child health (PHP&PM). This overlap occurred frequently among graduates; it is a question of how an individual defined his or her area of employment. Therefore, it should not be assumed that a graduate was employed outside his/her area of graduate study if the two areas do not correspond. As can be seen from the chart, there is in fact a high degree of correlation between area of study and area of employment.

AREAS OF SPECIALIZATION

<u>Graduate Study</u>											
	BIOSTAT	EPID	HSA	PHP&PM	H.EDUC/BS	ENV.SC	OS&H	NUTR	BIOMED	OTHER	UNK TOTAL
<u>Employment</u>											
BIOSTAT	41	8	2	1	1						53
EPID		106	11	3	1	1	1			5	1 129
HSA	2	19	329	17	13	2	1			6	1 391
PHP&PM	2	8	20	72	6	1	2			4	1 116
H.EDUC/BS		6	16	10	100	1	1	2	1	2	1 140
ENV.SC	1	4		1		84	7		2	1	100
OS&H		2	3	2	1	7	83		1	1	1 101
NUTR		4	3	2	2			50		1	62
BIOMED		6	7	1	3	1		1	19	2	40
OTHER	1	3	5							19	28
OTHER HEALTH		21	32	14	10	6		4	6	17	9 119
NON-HEALTH	3	3	15	2	5	4			1	2	1 36
UNKNOWN	1		1	1		2					2 7
Total	51	190	444	126	142	109	95	58	30	60	17 1,322

Prior degrees and Work Experience

Of the 1,610 graduates, 524 or 33% had a prior postbaccalaureate degree before entering a school of public health and 1,079 or 67% had only a prior bachelor's degree (7 unknown). The prior postbaccalaureate degrees were as follows:

<u>Degree</u>	<u>No. of Graduates</u>	
MD/DO	228)	
DDS	20)	48.7%
DVM	7)	
PhD	24	
EdD	3	
Other Doctorate	1	
JD	8	
MA	53	
MS	67	
MBA	8	
MSW	24	
MSN	9	
MPH	29	
Other masters	39	
Other degree	2	
Unknown	2	
	524	

Areas of study for the postbaccalaureate degree were as follows:

<u>Area</u>	<u>No. of Graduates</u>	
Humanities	9	1.8%
Social Sciences	90	17.6
Biological Sciences	349	68.3
Physical Sciences	21	4.1
Other	42	8.2
Unknown	13	-
	524	100.0%

The areas of undergraduate study for survey respondents were as follows:

<u>Area</u>	<u>No. of Graduates</u>	
Humanities	75	4.8%
Social Sciences	334	21.5
Psychology 114		
Biological Sciences	891	57.3
Biology 338		
Nursing 203		

<u>Area</u>	<u>No. of Graduates</u>	
Physical Sciences	121	7.8
Other	133	8.6
Unknown	56	-
	1,610	100.0%

Over half (57%) of all graduates had undergraduate training in the biological sciences, and over two-thirds (68%) of the graduates with postbaccalaureate training majored in the biological sciences. Social sciences were also well represented. About 43% of the graduates had undergraduate training outside the biological sciences*, another indication that the students in schools of public health come from a variety of academic backgrounds.

With regard to prior work experience in the health area, 1,214 or 75% indicated they had some experience. The median number of years of experience for this group was five years, with 60% having from 1-6 years of experience.

A total of 762 graduates (47%) indicated they had work experience in non-health fields; the median number of years of experience was three.

Importances of Public Health Degree

The graduates were asked how important their recent public health degree was in qualifying them for their present job. The results for employed graduates are as follows:

<u>Importance of Degree</u>	<u>No. of Graduates</u>	
Very important	670	51.6%
Somewhat important	372	28.6
Not important	220	16.9
Not sure	37	2.9
Unknown	23	-
	1,322	100.0%

Only 17% of the graduates said their recent public health degree was not important in qualifying them for their present job -- of this group, one-third were employed in other health (not public health) or non-health areas. Thus, the great majority of graduates felt their school of public health training was an important factor in their current employment.

* Most of the graduates in the "other" category were from areas outside the biological sciences.

Foreign Graduates

ASPH received a total of 133 surveys from foreign graduates. This is not a large sample (the schools reported a total of 553 foreign graduates in 1985-86), and it is risky to make general statements about foreign graduates from this group. It is very difficult for the schools to acquire information about their foreign graduates. This information is very important considering the large number of foreign students (1,410 in Fall 1985) the schools attract, and it is hoped that information about employment patterns can be obtained in the future. In the meantime, a brief analysis of the 1986 graduate data that is available might be useful.

Of the 133 foreign graduates, 103 (77%) were employed, 21 (16%) were enrolled in an educational program, and 9 (7%) were unemployed. Six of the unemployed graduates were seeking employment. Of the 103 working graduates 96 (93%) were employed full-time and 7 (7%) were employed part-time. Twenty-nine (30%) were employed in the U.S. and 68 (70%) were employed in foreign countries (6 unknown).

Sixty-one percent of the graduates were working for their previous employer (compared to 26% for U.S. graduates), either in the same position (35%) or a higher position (26%). The major employing agencies for foreign graduates were national/regional governments (25%), universities (21%) and health departments (19%). Major areas of job responsibility were administration (44%), educational services (20%) and clinical services (15%).

With regard to demographic information, the median age of foreign graduates was 34 years (compared to 31 years for U.S. graduates) and 56% were male (36% for U.S. graduates).

Seventy percent of the foreign graduates listed traineeships as their primary or secondary source of support during their graduate study (40% for U.S. graduates). Over half (55%) indicated traineeships as the primary source of support (26% for U.S. graduates).

Almost 91% of the foreign graduates received master's degrees, with the MPH being the most common. This is about the same as for U.S. graduates. Areas of specialization for foreign graduates for graduate study and employment were as follows:

<u>Area</u>	<u>Graduate Study</u>		<u>Employment</u>	
BIOSTAT	12	9.2%	8	7.8%
EPID	22	16.8	15	14.6
HSA	32	24.4	29	28.2
PHP&PM	20	15.3	12	11.7
H. EDUC/BS	5	3.8	4	3.9
ENV. SC	10	7.6	7	6.8
OS&H	4	3.1	5	4.9

<u>Area</u>	<u>Graduate Study</u>		<u>Employment</u>	
NUTR	8	6.1	2	1.9
BIOMED	5	3.8	2	1.9
OTHER	13	9.9	9	8.7
OTHER HEALTH	-	-	8	7.8
NON-HEALTH	-	-	2	1.9
UNKNOWN	2	-	-	-
Total	133	100.0%	103	100.0%

Seventy-five percent of the foreign graduates had prior postbaccalaureate degrees, compared to 33% for U.S. graduates. The great majority of these degrees were MDs. Over half (54%) of the total foreign graduates had prior MD degrees (14% for U.S. graduates).

Over 84% of the foreign graduates had prior health work experience; the median number of years of experience was 5-6 years. Twenty-seven percent had prior work experience in non-health areas with a median of two years of experience.

With regard to the importance of the public health degree, half of the graduates (50%) said the degree was very important, 31% said it was somewhat important, 16% said it was not important and 3% were not sure. These percentages were close to those for U.S. graduates.

IV. EMPLOYMENT TRENDS

Demographics

The "feminization" of public health, at least as represented by school of public health graduates, has continued at a steady rate. In the 1978/1979* survey, 55% of the respondents were female (53% of total U.S. graduates for those years). By 1981 57% of the respondents were female (59% for total U.S. graduates in 1980-81). In the current survey, 64% of the U.S. respondents were female (63% for total 1985-86 U.S. graduates). Considering that in 1960-61, only 28% of the graduates (including foreign) were female, this is a very significant trend. As far as is known, the implications of this trend have not been explored.

The median age of graduates has also been rising since the 1978/1979 survey. In that survey the median age was between 25-29 (survey results were represented in five-year cohorts by year of birth). In 1981 the median age of respondents was 30, and in 1986 it was 31. In 1978/1979 78% of the graduates were under 35 years of age, in 1981 76% were under 35 and in 1986 68% were under 35.

Data on race/ethnicity is best taken from the ASPH database, since it includes all U.S. graduates and is more reliable. The proportion of minority graduates since the 1977-78 academic year has not changed significantly. The numbers fluctuate somewhat over the years but do not reveal any real trends. The proportion of Asian graduates remains at 4-6%, for Black graduates it is 5-6%, for mainland Hispanics (excluding Puerto Rico) it is 1-3% and for American Indians/Alaskan Natives it is about 1%.

Employment

In the 1978/1979 survey, 80.8% of the respondents were employed, 12.7% were in educational studies and 6.5% were unemployed. In the 1981 survey, 76.7% were employed, 14.0% were in educational studies and 9.3% were unemployed. In the 1986 survey, 82.1% were employed, 11.5% were in educational studies, and 6.4% were unemployed. It is difficult to see any trends in this aspect of employment or to account for any differences over the years beyond the usual fluctuations in the economy and overall job market. In the 1981 survey, 6%

* For convenience, the survey of 1978 and 1979 graduates will be referred to in this way. However, it should be remembered that the survey includes graduates from two separate years, rather than one academic year, as this style (1978/1979) generally indicates.

of the respondents were unemployed and seeking work; in the 1986 survey 5% of the respondents were unemployed and seeking work. The overall employment outlook for graduates, as represented by the surveys, continues to be favorable.

The proportion of graduates who were working for their previous employer has not changed substantially. In the 1978/1979 survey, 25% of the respondents were working for their previous employer; in the 1981 survey the proportion was 28% and in the 1986 it was 26%. This is rather surprising given the increasing number of employed students entering schools of public health in recent years. It was expected that a higher proportion of graduates would be working for their previous employers, but this was not the case.

A comparison of type of employing agency, employer sponsorship and job responsibilities can be made, although the 1978/1979 data is not very comparable, as some different categories were used and the published report listed combined categories. The 1978/1979 data will be used when it is comparable.

<u>Type of Employing Agency</u>	<u>1978/1979</u>	<u>1981</u>	<u>1986</u>
1. Association, foundation or voluntary agency (e.g., AHA, AMA, or Heart Fund)	4.2%	3.5%	4.3%
2. Blue Cross/Blue Shield or other insurance		0.7	1.1
3. Clinic or community health center		4.4	3.7
4. Consulting firm		2.6	5.3
5. Federal Government (national or regional)		10.2	9.6
6. Health department (State or local)		11.4	14.2
7. Health maintenance organization (HMO)		2.5	3.7
8. Group practice (fee-for-service)		1.9	1.7
9. Health systems agency or other planning agency		1.0	0.4
10. Home health agency		0.4	0.7
11. Hospital	20.5	20.3	19.2
12. International health agency/institute		0.9	1.3
13. Long-term care facility		0.5	0.8
14. Mental health or retardation facility		2.1	1.1
15. Professional Standards Review Organization		0.4	0.1

<u>Type of Employing Agency</u>	<u>1978/1979</u>	<u>1981</u>	<u>1986</u>
16. Regulatory agency		1.7	1.5
17. Research		3.3	2.5
18. Industrial or commercial firm	10.2	8.0	5.5
19. University (teaching, research, or administration)		18.5	16.7
20. Other (specify)		5.8	6.6

A comparison of the 1981 and 1986 data shows a decrease in employment in industrial or commercial firms, a slight decrease in university employment, and an increase in employment in health departments.

With regard to employer ownership/sponsorship, the following comparisons can be made:

<u>Employer Ownership</u>	<u>1978/1979</u>	<u>1981</u>	<u>1986</u>
Federal Govt.	18.3%	15.5%	13.0%
State Govt.	20.6	25.0	21.8
Other Govt.	13.0	9.3	12.3
Voluntary/non-profit	23.9	31.2	32.8
Proprietary/for-profit	13.0	17.1	18.9
Other	11.2	2.0	1.2

The data shows an overall decrease in government-sponsored employment -- 52% in 1978/79, 50% in 1981 and 47% in 1986 -- and an increase in non-governmental-sponsored employment (48% in 1978/1979, 50% in 1981 and 53% in 1986). Being more specific than this is difficult because of problems with the data that were noted in Chapter III.

In terms of job responsibilities, the data for the three surveys is as follows:

<u>Job Responsibility</u>	<u>1978/1979</u>	<u>1981</u>	<u>1986</u>
1. Administration/ planning/evaluation/policy analysis	38.5%	31.4%	35.8%
2. Clinical services to patients or clients	11.7	16.7	15.7
3. Laboratory services to patients or clients	--	3.1	1.2
4. Social services to patients or clients	--	1.4	1.7

<u>Job Responsibility</u>	<u>1978/1979</u>	<u>1981</u>	<u>1986</u>
5. Educational/ community organi- zational services to patients or clients	5.1	5.5	7.3
6. Educational services to students and/or research	15.9	19.2	14.6
7. Consultation services to agencies or institutions	10.9	6.5	11.0
8. Other	17.8	12.2	12.8

The categories were the same in all three surveys, but the author has more confidence in the 1981 and 1986 data, since it was coded under the same system. Between 1981 and 1986 there was a decrease in the educational services to students area and increases in the consultation and administration areas.

With regard to job search, the data for 1981 and 1986 graduates is very similar. Most employed graduates in both time periods found employment in about two months, with the great majority (70% in 1981, 69% in 1986) finding employment in less than four months. Both groups had about 2-3 interviews and received 1-2 job offers. The 1978/1979 survey indicated an average of 3.3 interviews and 2.7 job offers. There was no information on length of time involved.

Areas of work for 1981 and 1986 graduates (not available for 1978/1979 graduates) were as follows:

<u>Area</u>	<u>1981</u>	<u>1986</u>
BIOSTAT	5.8%	4.0%
EPID	9.9	9.8
HSA	20.9	29.7
PHP&PM	8.2	8.8
H.EDUC/BS	11.7	10.7
ENV.SC	7.9	7.6
OS&H	9.2	7.7
NUTR	6.2	4.7
BIOMED	3.4	3.0
OTHER	2.4	2.1
OTHER HEALTH	11.9	9.1
NON-HEALTH	2.5	2.7

The major change is an increase in the proportion of graduates working in the health services administration area. While there are some slight differences in some categories for 1981 and 1986 (biostatistics, nutrition, OS&H), the

differences are not large enough to state with confidence that there is a decrease in employment in these areas.

Salary levels have continued to increase. In the 1981 survey the median salary for full-time employed graduates was \$21,600 (mean \$24,400); in the 1986 survey the median salary was \$28,000 (mean \$31,524). This represents a 30% increase in the median salary over a five-year period.

Finances

In the 1981 survey, 53% of the graduates reported that they had education-related indebtedness. The median amount of debt for these graduates was \$6,000. In the 1986 survey, 60% of the graduates had education-related indebtedness, with a median debt of \$10,000. In the 1981 survey 33% of the graduates had prior education-related indebtedness (i.e., before entering a school of public health); the median amount was \$4,000. By the 1986 survey, the percentage of graduates with prior education-related indebtedness had risen to 41%, and the median amount was \$6,000. There is no information on this subject from the 1978/1979 survey.

With regard to sources of support for meeting education-related expenses, the following is a comparison of 1981 and 1986 graduates:

<u>Source of Support</u>	<u>Primary Source</u>		<u>Secondary Source</u>	
	<u>1981</u>	<u>1986</u>	<u>1981</u>	<u>1986</u>
Full-time job during academic year	9.4%	12.6%	2.9%	5.0%
Part-time job during academic year	9.5	9.6	24.3	26.7
Immediate family or relatives (including spouse)	13.2	14.6	14.1	13.5
Loan(s)	17.7	21.5	15.9	17.8
Personal savings and/or unearned income	4.9	7.8	14.4	12.5
Subsidization by employer	5.6	5.8	2.8	2.7
Traineeship, fellowship, scholarship, grant	37.9	25.8	23.5	19.0
Veterans' education benefits	1.0	0.8	1.5	1.6
Other	0.9	1.5	0.7	1.2

As can be seen, the recent graduates had significantly less traineeship support and relied more on full-time jobs, loans and personal savings to finance their educational training. In the 1981 survey, 49% or nearly half of the graduates indicated they had received a U.S. Public Health

Service Traineeship during their graduate study. By 1986 the proportion of graduates who received such support was less than one-third (31%).

Degrees and Areas of Specialization

Once again, it is probably best to rely on the ASPH database. The proportion of graduates in the various degree and area of specialization categories has not changed substantially since 1978. In 1985-86 the degrees awarded to U.S. graduates were as follows:

<u>Degree</u>	<u>Total U.S. Graduates</u>
MPH	1,695
MS	296
MSPH	93
MHA/MHSA	165
OTHER MASTERS	91
DrPH	79
ScD	40
PhD	160
Other Doct.	7
Joint Degree	77
Total	2,703

Areas of specialization for U.S. graduates in 1985-86 were as follows:

<u>Area</u>	<u>Total U.S. Graduates</u>
BIOSTAT	86.0
EPID	360.0
HSA	846.0
PHP&PM	211.5
H.EDUC/BS	253.0
ENV.SC	347.5
OS&H	63.0
NUTR	97.5
BIOMED	78.0
OTHER/NONSPECIALIZED	360.5
Total	2703.0

Prior Degrees and Experience

A comparison of highest previous degree and health-related work experience for graduates from the three surveys can be made using the 1978/1979 survey categories.

<u>Highest Previous Degree</u>	<u>1978/1979</u>	<u>1981</u>	<u>1986</u>
Bachelors	52.0%	67.1%	67.3%
Nursing	9.9	N/A	N/A
Masters	22.8	17.6	14.3
Doctorate	15.3	15.3	18.4

<u>Health-Related Work Exp.</u>	<u>1978/1979</u>	<u>1981</u>	<u>1986</u>
None	25.6%	21.8%	19.9%
1-2 years	29.6	24.6	21.0
3-5 years	23.0	27.5	27.3
6+ years	21.8	26.1	31.8

There has been a slight increase in the proportion of graduates with prior doctorates and an increasing proportion of graduates have prior health-related work experience.

V. SUMMARY AND CONCLUSIONS

The results of the 1986 employment survey show a continued demand for school of public health graduates. Most of the graduates found employment soon after graduation and apparently without a great deal of effort. The majority of graduates are working in the areas for which they were trained. Salary levels have increased about 30% overall in the last five years and the median salary for graduates in 1987 is \$28,000. More graduates appear to be employed in the health administration area.

While the proportion of graduates working for government-sponsored agencies has decreased slightly, the change has not been as dramatic as was expected. The great majority of graduates still work for government-sponsored or voluntary/non-profit agencies. Less than 20% work for proprietary firms.

Despite the fact that graduates still gravitate to public sector employment, public support for their graduate study has declined sharply. The proportion of graduates receiving PHS traineeships fell from 49% in 1981 to 31% in 1986. All traineeship-type funding has declined, and graduates must rely more on loans, personal savings and employment to finance their graduate studies. The median debt load of graduates has increased to \$10,000 and an increasing proportion of graduates (60% in 1986) are in debt.

This is the third survey that ASPH has conducted within the last eight years of new graduate employment. While the data from these surveys is useful in assessing the current job market, it is limited in other ways. It provides no information on career patterns within public health. We have very limited information on what happens to our graduates over time. We do not know about their mobility or career satisfaction. We do not know how many leave the profession or for what reasons. We do not know what the long-term outlook is for a career in public health.

ASPH should conduct a longitudinal study of graduate employment patterns. It should investigate job changes, income levels, job satisfaction and other factors over time. Only then can we have a comprehensive picture of employment patterns for school of public health graduates.

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APPENDIX A

ASSOCIATION OF SCHOOLS OF PUBLIC HEALTH 1015 Fifteenth Street, N. W. Washington, D.C.

1986 SCHOOLS OF PUBLIC HEALTH GRADUATE EMPLOYMENT SURVEY

The following information is requested to assist the Association of Schools of Public Health in assessing employment patterns. The information will be used in demonstrating the role of schools of public health in meeting national health manpower requirements. Your care and attention in completing this form will be greatly appreciated.

Please supply the following information regarding your **FIRST JOB** after graduating in 1986 from a school of public health. All information will be treated as confidential. Data from this survey will be reported in the aggregate and will not identify individuals.

1. Did you obtain employment after graduation from a school of public health? (Circle response)

1. Employed or about to be employed (Proceed to item 2).

2. Enrolled in an educational or training program which precludes employment as a primary activity (Proceed to item 10).

3. Unemployed

If unemployed, are you seeking employment? (Circle response)

1. Yes (Proceed to item 9) 2. No (Proceed to item 10)

2. Are you employed full-time or part-time? (Circle response)

1. Full-time (35 hours or more per week)

2. Part-time (less than 35 hours per week)

3. Indicate your gross annual salary: \$ _____/year.

4. What is the full title of your first position following your recent graduation from a school of public health?

Position Title: _____

Name and address of organization, institution, or agency:

5. Did you work for the same employer before entering a school of public health? (Circle response)

1. Yes, I am employed in the same position.

2. Yes, but I am now employed in a higher position.

3. No.

Leave Blank

School/ / /
1 2

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3 4 5

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6

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7

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9 10 11 12 13 14

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14A 14B

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15

6. Indicate from the following list the type of agency/institution/ organization in which you have accepted employment. (Circle only ONE response.)

 / / /
16 17

- | | |
|--|--|
| 1. Association, foundation or voluntary agency (e.g., AHA, AMA, or Heart Fund) | 12. International health agency/institute |
| 2. Blue Cross/ Blue Shield or other insurance | 13. Long-term care facility |
| 3. Clinic or community health center | 14. Mental health or retardation facility |
| 4. Consulting firm | 15. Professional Standards Review Organization |
| 5. Federal Government (national or regional) | 16. Regulatory agency |
| 6. Health department (State or local) | 17. Research |
| 7. Health maintenance organization (HMO) | 18. Industrial or commercial firm |
| 8. Group practice (fee-for-service) | 19. University (teaching, research, or administration) |
| 9. Health systems agency or other planning agency | 20. Other (specify): _____ |
| 10. Home health agency | |
| 11. Hospital | |

7. Specify the type of primary ownership or sponsorship of the agency/institution/organization in which you have accepted employment. (Circle only ONE response.)

 / / /
18

- | | |
|--------------------------------------|---|
| 1. Federal Government (civilian) | 6. Voluntary/not-for-profit(non-Govt.) |
| 2. Federal Government (military) | 7. Proprietary/for profit |
| 3. State Government | 8. Other (specify): _____ |
| 4. Local Government (city or county) | |
| 5. Regional (multi-State) | |

8. Which of the following best describes the primary area of responsibility associated with your first job after graduating from the school of public health? (Circle only ONE response.)

 / / /
19

- | | |
|---|--|
| 1. Administration/planning/evaluation/ policy analysis | 6. Educational services to students and/or research |
| 2. Clinical services to patients or clients | 7. Consultation services to agencies or institutions |
| 3. Laboratory services to patients or clients | 8. Other (specify) _____ |
| 4. Social services to patients or clients | |
| 5. Educational/community organizational services to patients or clients | |

9. Specify the following information regarding your job search:

 / / /
20 21

- | | |
|---|--|
| 1. Number of interviews _____ | |
| 2. Number of job offers to date _____ | |
| 3. Amount of time you actively sought employment _____ months | |

 / / /
22 23

 / / /
24 25

10. Age: _____ (years)

 / / /
26 27

11. Sex: (Circle only ONE response) 1. Female 2. Male

 / / /
28

12. Citizenship: (Circle only ONE response.)

1. U.S. Citizen or Permanent U.S. Resident
2. Foreign Citizen

 / / /
28A

13. Race/ethnic background: (Circle only ONE response.)

1. Asian/Pacific Islander
2. Black, not of Hispanic origin
3. White, not of Hispanic origin
4. Hispanic
5. American Indian/Alaskan Native
6. Other (specify) _____

 / / /
29

14. Total amount of education-related indebtedness upon enrollment in school of public health:

\$ _____

 / / / / / /
30 31 32 33 34

15. Total amount of current education-related indebtedness:

\$ _____

 / / / / / /
35 36 37 38 39

16. From what source(s) did you obtain funds for meeting education-related expenses during your enrollment in a school of public health?

Primary Source (Circle only <u>ONE</u>)	Secondary Source (Circle only <u>ONE</u>)	Source of Support Categories
1.	1.	Full-time job during academic year
2.	2.	Part-time job during academic year
3.	3.	Immediate family or relatives (including spouse)
4.	4.	Loan(s)
5.	5.	Personal savings and/or unearned income
6.	6.	Subsidization by employer
7.	7.	Traineeship, fellowship, scholarship, grant
8.	8.	Veterans' educational benefits
9.	9.	Other (specify): _____

 / / /
40 40A

 / / /
41 41A

17. What public health degree did you receive upon graduation from the school of public health?
(Circle only ONE response.)

- | | |
|--------------------------------------|---|
| 1. MPH | 7. PhD |
| 2. MSPH | 8. DrPH |
| 3. MS or SM | 9. DSc or ScD |
| 4. MHA | 10. Other Doctorate:
(specify) _____ |
| 5. MIA | 11. Other: _____
(specify) _____ |
| 6. Other Masters:
(specify) _____ | |

 / / /
59 60

18. Indicate your area of specialization in graduate studies and in your first job. In the first column indicate your area of specialization while enrolled in the school of public health. In the second column indicate the speciality area which most closely relates to the kind of work performed on your first job following graduation from a school of public health.

<u>Graduate Study</u> (Circle only ONE)	<u>First Post-Graduate Job</u> (Circle only ONE)	<u>Area of Specialization</u>
1.	1.	Biostatistics
2.	2.	Epidemiology
3.	3.	Health Services Administration
4.	4.	Public Health Practice and Program Management
5.	5.	Health Education/Behavioral Sciences
6.	6.	Environmental Sciences
7.	7.	Occupational Safety and Health
8.	8.	Nutrition
9.	9.	Biomedical and Laboratory Practice
10.	10.	Other (specify): _____

/ / /
42 43

/ / /
44 45

19. While you were a student, what was your enrollment status? (Circle ONE response that best describes the MAJOR portion of your tenure as a student, excluding thesis period.)

/ /
63

1. Full-time student in program on main campus.
2. Part-time student in program on main campus.
3. Student in off-campus or extended degree program.

20. Prior to entering the school of public health, did you have a postbaccalaureate degree (e.g., Master's, Doctorate, L.L.D., M.D., etc.)? (Circle response)

/ /
46

1. Yes

Specify degree: _____

Specialty area: _____

/ / /
57 58

/ / /
61 62

2. No

21. Please specify your baccalaureate degree and undergraduate major.

Degree: _____

Major: _____

/ / /
64 65

/ / /
66 67

22. Before entering a school of public health, how many years work experience did you have in the following setting(s)?

1. Work experience in health facility, health agency, health training institution, or other health-related setting.

 / / /
48 49

Specify number of years experience: _____

2. Work experience in field other than health.

 / / /
51 52

Specify number of years experience: _____

23. While enrolled in a school of public health were you supported, in part or totally, by a U.S. Public Health Service Traineeship? (Circle response)

1. Yes 2. No 3. Not Sure

 / /
53

If yes, circle the academic year, or years, during which you received a U.S. Public Health Service Traineeship: (Circle ALL THAT APPLY.)

1. 1983-84

2. 1984-85

3. 1985-86

 / / / /
54 55 56

24. When you applied to your school for admission, did you also apply to any other Schools of Public Health? (Circle response)

1. Yes

How many others? _____

 / /
68

2. No

 / / /
69 70

25. List the primary factors that influenced you to choose a career in public health.

26. How important was your recent public health degree in qualifying you for your present job? (Circle only ONE response.)

1. Public health degree was very important for job.
2. Public health degree was somewhat important for job.
3. Public health degree was not important for job.
4. Not sure.
5. Not relevant - I am not currently employed.

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Thank you for completing the 1986 Schools of Public Health Graduate Employment Survey. Please use the enclosed prepaid envelope to return this survey to: Association of Schools of Public Health, 1015 Fifteenth Street, N.W., Suite 404, Washington, D.C. 20005

APPENDIX B

The following areas of specialization are used:

- BIOSTAT - Biostatistics, biometry.
- EPID - Epidemiology.
- HSA - Health services administration, hospital administration, health policy, health planning, health management, health services organization, health law, evaluation research.
- PHP&PM - Public health practice and program management, maternal and child health, gerontology, dental public health, optometric public health, public health nursing, public health social work, veterinary public health, mental health, community health sciences, community health practice.
- H.EDUC/BS - Health education, public health education, health education administration, behavioral sciences, socio-medical sciences, health promotion, health behavior.
- ENV.SC - Environmental science, environmental health, toxicology, radiological health, environmental chemistry, water quality, environmental health planning.
- OS&H - Occupational safety and health, industrial hygiene, occupational medicine, aerospace medicine.
- NUTR - Nutrition, public health nutrition.
- BIOMED - Biomedical and laboratory sciences, microbiology, parasitology, immunology, cancer biology, biochemistry, biophysics, pathobiology.
- OTHER - All other areas of specialization including international health, population/family planning, tropical public health, urban health, disease control, genetics, clinical research analysis, and general public health (nonspecialized) studies.
- OTHER HEALTH - Refers to employment only. Individual is not working in public health field but is employed in the health area (e.g., clinical practice, school nurse, medical supply company).
- NON-HEALTH - Refers to employment only. Individual is employed in non-health-related position.
- UNKNOWN - Area of specialization is unknown.